Lifetime Prevalence of Mental Disorders and Suicide Attempts in Diverse Lesbian, Gay, and Bisexual Populations

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Past studies have reported little about variability in mental disorders among lesbians, gay men, and bisexual individuals. We assessed the prevalence of psychiatric disorders in 388 lesbian, gay, and bisexual Black, Latino, and White individuals. Black lesbians, gay men, and bisexual individuals had lower prevalence of all disorders than did Latino and White individuals; younger cohorts had fewer mood disorders than did older cohorts; bisexual persons had more substance use disorders than did gay men and lesbians; and Latino respondents attempted suicide more often than did White respondents. (Am J Public Health. 2008;98:1004-1006. doi: 10.2105/AJPH.2006.096826)

General population studies that used random sampling methods to estimate the prevalence of mental disorders have shown that lesbians, gay men, and bisexual individuals had more anxiety, mood, and substance use disorders¹⁻⁷ and more suicide attempts⁸ than did heterosexual individuals. However, general population studies include only a few lesbian, gay, and bisexual respondents and therefore provide little information about variability within lesbian, gay, and bisexual populations. Different sampling methodologies are needed to represent variability among lesbian, gay, and bisexual subgroups defined by gender, race/ethnicity, age, and bisexual versus gay or lesbian identity. We assessed the prevalence of mental disorders and suicide attempts in diverse lesbian, gay, and bisexual groups.

Social stress theories lead us to expect that compared with socially advantaged groups, disadvantaged groups are at a higher risk for mental disorders.⁹ We thus hypothesized (1) that Black and Latino lesbians, gay men, and bisexual individuals have more mental disorders than do White lesbians, gay men, and bisexual individuals because they are exposed to more stress related to prejudice and discrimination associated with their race/ethnicity10,11; (2) that bisexual persons have more mental disorders than do gay men or lesbians because they are exposed to more stress related to their experience of stigma in both gay and heterosexual communities¹²; and (3) that younger individuals have fewer disorders than do older individuals because younger individuals came out in a less prejudicial social environment. 13-15

METHODS

Sample

Respondents in our study were 388 New York City residents aged 18 to 59 years who identified themselves as lesbian, gay, or bisexual; male or female; and White, Black, or Latino; and who consented to complete the mental health assessment. Respondents were sampled between February 2004 and January 2005 through direct solicitation by 25 outreach workers in 274 diverse venues, such as bookstores and cafes, social groups, and parks, as well as through snowball referrals (response rate=0.6; cooperation rate=0.8).

Of the respondents, 18% identified as bisexual and the rest as lesbian, gay, or similar (e.g., queer); 44% were aged 18 to 29 years, 44% were aged 30 to 44 years, and 12% were aged 45 to 59 years; and 22% had a high school education or less, 56% had negative net financial worth (more debt than assets), and 17% were unemployed (all measures of socioeconomic status). Black and Latino respondents had lower socioeconomic status and a higher rate of unemployment than did White respondents.

Diagnostic Assessment

Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), 17 psychiatric diagnoses were made with the computer-assisted personal interview mode of the World Health Organization World Mental

Health Survey Initiative of the Composite International Diagnostic Interview (Version 19). 18

Statistical Analysis

We calculated unadjusted prevalence estimates and standard errors. We used logistic regression to assess odds ratios (ORs) and 95% confidence intervals (CIs) after we adjusted for education, negative net worth, and unemployment status. We used SPSS version 14 (SPSS Inc, Chicago, Illinois).

RESULTS

Table 1 presents unadjusted prevalence estimates of mental disorders and standard errors, and Table 2 presents the corresponding adjusted ORs and 95% CIs. Contrary to our hypothesis, Black and Latino lesbians, gay men, and bisexual individuals did not have higher disorder prevalence than did White participants; indeed, Black lesbians, gay men, and bisexual individuals had significantly fewer disorders than did White participants. The prevalence of disorders among Latino lesbians, gay men, and bisexual individuals was similar to that of White lesbians, gay men, and bisexual individuals. Men and women did not differ substantially in disorder prevalence. As expected, bisexual identity was related to higher prevalence of substance use disorders but not of anxiety or mood disorders.

Young lesbians, gay men, and bisexual individuals (aged 18-29 and 30-44) had lower disorder prevalence than did older individuals (aged 45-59) across almost all categories, and the difference was significant for mood disorders. To test whether this finding reflected a bias related to the greater opportunity for older people to have had a disorder at some point because of their longer life span, we examined the prevalence of disorders in the 12-month period before the interviews, when all respondents had the same opportunity for disorders. We found that the age pattern held for 12-month prevalence and was significant for mood disorders for the younger age groups (30 to 44 years: OR=0.4; 95% CI=0.2, 0.8; and 18 to 29 years: OR=0.4; 95% CI=0.1, 0.5) compared with the oldest group (data not shown). The consistency between lifetime and 12-month prevalence suggests that the lifetime prevalence

TABLE 1—Percentages of Lesbian, Gay, and Bisexual Respondents (N = 388) Reporting Lifetime Mental Disorders, Substance Use Disorders, and Suicide Attempts: New York, NY, February 2004 to January 2005

	Total, % (SE)	Male, % (SE)	Female, % (SE)	White, % (SE)	Black, % (SE)	Latino, % (SE)	Lesbian or Gay % (SE)	Bisexual, % (SE)	Aged 18-29 Years, % (SE)	Aged 30-44 Years, % (SE)	Aged 45-59 Years, % (SE)
Total, No.	388	193	195	132	128	128	318	70	172	171	45
Any anxiety disorder	44.3 (2.5)	43.0 (3.6)	45.6 (3.6)	47.0 (4.4)	36.7 (4.3)	49.2 (4.4)	43.7 (2.8)	47.1 (6.0)	46.5 (3.8)	43.9 (3.8)	37.8 (7.3)
Panic disorder	4.9 (1.1)	5.2 (1.6)	4.6 (1.5)	9.1 (2.5)	0.8 (0.8)	4.7 (1.9)	5.7 (1.3)	1.4 (1.4)	5.2 (1.7)	4.1 (1.5)	6.7 (3.8)
Specific phobia	24.5 (2.2)	21.8 (3.0)	27.2 (3.2)	22.7 (3.7)	23.4 (3.8)	27.3 (4.0)	25.2 (2.4)	21.4 (4.9)	26.2 (3.4)	26.3 (3.4)	11.1 (4.7)
Social phobia	22.2 (2.1)	23.8 (3.1)	20.5 (2.9)	20.5 (3.5)	18.8 (3.5)	27.3 (4.0)	21.1 (2.3)	27.1 (5.4)	22.1 (3.2)	23.4 (3.2)	17.8 (5.8)
Generalized anxiety disorder	8.8 (1.4)	9.8 (2.2)	7.7 (1.9)	12.9 (2.9)	4.7 (1.9)	8.6 (2.5)	8.5 (1.6)	10.0 (3.6)	7.6 (2.0)	8.8 (2.2)	13.3 (5.1)
Any mood disorder	30.7 (2.3)	26.4 (3.2)	34.9 (3.4)	38.6 (4.3)	21.9 (3.7)	31.3 (4.1)	30.2 (2.6)	32.9 (5.7)	29.1 (3.5)	25.7 (3.4)	55.6 (7.5)
Major depressive disorder	30.7 (2.3)	26.4 (3.2)	34.9 (3.4)	38.6 (4.3)	21.9 (3.7)	31.3 (4.1)	30.2 (2.6)	32.9 (5.7)	29.1 (3.5)	25.7 (3.4)	55.6 (7.5)
Dysthymia	5.9 (1.2)	6.2 (1.7)	5.6 (1.7)	9.8 (2.6)	3.1 (1.5)	4.7 (1.9)	4.4 (1.2)	12.9 (4.0)	4.7 (1.6)	4.1 (1.5)	17.8 (5.8)
Any substance use disorder	38.4 (2.5)	36.8 (3.5)	40.0 (3.5)	41.7 (4.3)	30.5 (4.1)	43.0 (4.4)	35.5 (2.7)	51.4 (6.0)	35.5 (3.7)	39.8 (3.8)	44.4 (7.5)
Alcohol abuse	25.0 (2.2)	24.0 (3.1)	26.0 (3.2)	30.0 (4.0)	19.0 (3.5)	27.0 (3.9)	23.0 (2.4)	33.0 (5.7)	20.0 (3.1)	29.0 (3.5)	29.0 (6.8)
Alcohol dependence	10.3 (1.5)	9.8 (2.2)	10.8 (2.2)	12.9 (2.9)	7.0 (2.3)	10.9 (2.8)	9.8 (1.7)	12.9 (4.0)	8.1 (2.1)	14.0 (2.7)	4.4 (3.1)
Drug abuse	28.0 (2.3)	24.0 (3.1)	32.0 (3.4)	29.0 (4.0)	25.0 (3.8)	31.0 (4.1)	26.0 (2.5)	39.0 (5.9)	26.0 (3.4)	30.0 (3.5)	31.0 (7.0)
Drug dependence	12.4 (1.7)	7.8 (1.9)	16.9 (2.7)	14.4 (3.1)	10.2 (2.7)	12.5 (2.9)	11.0 (1.8)	18.6 (4.7)	8.1 (2.1)	14.6 (2.7)	20.0 (6.0)
Any disorder	69.8 (2.3)	65.3 (3.4)	74.4 (3.1)	76.5 (3.7)	60.2 (4.3)	72.7 (4.0)	68.2 (2.6)	77.1 (5.1)	69.8 (3.5)	67.8 (3.6)	77.8 (6.3)
Serious suicide attempt	8.3 (1.4)	9.3 (2.1)	7.2 (1.9)	4.6 (1.8)	7.0 (2.3)	13.3 (3.0)	7.9 (1.5)	10.0 (3.6)	8.7 (2.2)	5.9 (1.8)	15.6 (5.5)

Note. Psychiatric diagnoses were made with the computer-assisted personal interview (Version 19) of the World Health Organization World Mental Health Survey version of the Composite International Diagnostic Interview. 18

TABLE 2—Sociodemographic Predictors of Lifetime Mental Disorders and Serious Suicide Attempts Among Lesbians, Gay Men, and Bisexual Individuals (N = 388): New York, NY, February 2004 to January 2005

	Any Anxiety Disorder, AOR (95% CI)	Any Mood Disorder, AOR (95% CI)	Any Substance Use Disorder, AOR (95% CI)	Any Disorder, AOR (95% CI)	Serious Suicide Attempt, AOR (95% CI)	
Gender						
Man (Ref)	1.0	1.0	1.0	1.0	1.0	
Woman	1.1 (0.7, 1.7)	1.5 (0.9, 2.3)	1.1 (0.7, 1.7)	1.5 (1.0, 2.4)	0.8 (0.4, 1.6)	
Race/ethnicity						
White (Ref)	1.0	1.0	1.0	1.0	1.0	
Black	0.6* (0.4, 1.0)	0.5* (0.3, 0.8)	0.5* (0.3, 0.9)	0.4* (0.3, 0.8)	1.4 (0.5, 4.1)	
Latino	1.0 (0.6, 1.7)	0.8 (0.4, 1.3)	0.9 (0.5, 1.5)	0.8 (0.4, 1.4)	2.9* (1.1, 7.7)	
Bisexual						
No (lesbian or gay; Ref)	1.0	1.0	1.0	1.0	1.0	
Yes	1.1 (0.7, 1.9)	1.2 (0.7, 2.1)	1.8 (1.0, 3.0)*	1.6 (0.9, 2.9)	1.2 (0.5, 2.9)	
Age group, y						
45-59 (Ref)	45–59 (Ref) 1.0		1.0	1.0	1.0	
30-44	1.3 (0.7, 2.6)	0.3* (0.1, 0.5)	0.8 (0.4, 1.6)	0.6 (0.3, 1.3)	0.3* (0.1, 0.9)	
18-29	1.5 (0.8, 3.0)	0.3* (0.2, 0.7)	0.7 (0.4, 1.4)	0.7 (0.3, 1.5)	0.5 (0.2, 1.3)	

Note. AOR = adjusted odds ratio; CI = confidence interval. Psychiatric diagnoses were made with the computer-assisted personal interview (Version 19) of the World Health Organization World Mental Health Survey version of the Composite International Diagnostic Interview. 18

finding was not the result of an age bias. We also found that younger respondents had fewer serious suicide attempts than did older respondents (but this was statistically significant only for the middle age group).

In contrast to the findings regarding mental disorders, Black and Latino lesbians, gay men, and bisexual individuals reported a greater number of serious suicide attempts, which was significant for Latino respondents, than did White respondents. These suicide attempts occurred at a median age of 17.5 years (ranging from 17 among White men to 22.5 among Black women).

DISCUSSION

A limitation of this study is that we used a nonrandom sample. However, we attempted to reduce bias by sampling many diverse venues and avoiding venues that would overrepresent individuals with mental disorders (such as clinics and 12-step programs; I.H. Meyer, PhD, D.M. Frost, MA, R. Narvaez, PhD, J.H. Dietrich, MPH, "Project Stride: Methodology and Technical Notes," unpublished data, 2006).

^aAdjusted for education, negative net worth, and unemployment status.

^{*}P<.05.

RESEARCH AND PRACTICE

That the prevalence estimates derived from our sample were similar to those obtained from random samples of lesbians, gay men, and bisexual individuals suggests that our sample was not significantly unrepresentative of the general lesbian, gay, and bisexual population.^{2–7} Our method's advantage was that we sampled sufficient numbers of diverse respondents to allow us to test variability among lesbian, gay, and bisexual subgroups.

To our knwledge, our study was the first to examine hypotheses about the prevalence of DSM-IV mental disorders among Black and Latino, versus White, lesbians, gay men, and bisexual individuals. We showed that Blacks and Latinos do not have more mental disorders than do Whites. By contrast, compared with Whites, more Black and, especially, Latino gay men, lesbians, and bisexual individuals reported a history of a serious suicide attempt. Because suicide attempts occurred at an early age, we speculate that they coincided with a coming-out period and were related to the social disapprobation afforded to a lesbian, gay, and bisexual identity. Our findings were consistent with assertions that these problems may be more potent among lesbians, gay men, and bisexual individuals in Latino and other communities of color. 10,11 If so, prevention efforts to reduce suicide risk should be tailored to lesbian, gay, and bisexual youths in these communities.

Researchers and prevention planners should note that the higher risk for suicide in these communities was not associated with a higher risk for mental disorders and should distinguish between these outcomes. These patterns require further investigation. One plausible hypothesis is that a higher risk for suicide among lesbians, gay men, and bisexual individuals who are racial/ethnic minorities follows major stressful events, such as assault, abuse, or homelessness, rather than depressive or substance use disorders. ¹⁹

Our finding that younger lesbians, gay men, and bisexual individuals had fewer mood disorders than did older lesbians, gay men, and bisexual individuals is consistent with social stress theories that predicted that the liberalization of social attitudes toward homosexuality over the past few decades would lead to a decline in stress and related disorders among lesbians, gay men, and bisexual individuals. ^{13–15} It

is encouraging to note that the lower prevalence of mood disorders is concomitant with a lower (albeit statistically significant only for the middle age group) prevalence of suicide attempts in the younger cohort.

In terms of implications to social stress theory, we have reported inconsistent findings. Our results regarding age cohorts were consistent with social stress hypotheses, but the results regarding race/ethnicity were inconsistent with our and others' predictions made on the basis of social stress theory. 9–11 It is notable that the race/ethnicity patterns reported here among lesbians, gay men, and bisexual individuals were similar to race differences found among heterosexual individuals in general population studies. 18 Further research needs to explain this seeming contradiction of social stress predictions.

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This brief was accepted February 17, 2007.

Contributors

I. H. Meyer was the principal investigator of the research project. I. H. Meyer and S. Schwartz conceptualized and wrote the article. J. Dietrich completed the analyses. All authors helped to conceptualize ideas, interpret findings, and review drafts of the article.

Acknowledgments

The research reported in this brief was supported by National Institute of Mental Health (grant R01MH066058).

The authors thank Robert M. Kertzner and Theo Sandfort for insightful comments on an early draft of this brief.

Human Participant Protection

The research protocol was approved by Western Institutional Review Board in contract with Columbia University.

References

- Cochran SD, Keenan C, Schober C, Mays VM. Estimates of alcohol use and clinical treatment needs among homosexually active men and women in the U.S. population. *J Consult Clin Psychol.* 2000;68: 1062–1071.
- 2. Cochran SD, Sullivan JG, Mays VM. Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay, and bisexual adults in the United States. *J Consult Clin Psychol.* 2003;71:53–61.

- 3. Cochran SD, Mays VM. Relation between psychiatric syndromes and behaviorally defined sexual orientation in a sample of the US population. *Am J Epidemiol.* 2000;151:516–523.
- Cochran SD, Mays VM. Lifetime prevalence of suicide symptoms and affective disorders among men reporting same-sex sexual partners: results from NHANES III. Am J Public Health. 2000;90:573–578.
- 5. Gilman SE, Cochran SD, Mays VM, Hughes M, Ostrow D, Kessler RC. Risk of psychiatric disorders among individuals reporting same-sex sexual partners in the National Comorbidity Survey. *Am J Public Health*. 2001;91:933–939.
- Sandfort TG, de Graaf R, Bijl RV, Schnabel P.
 Same-sex sexual behavior and psychiatric disorders: findings from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). Arch Gen Psychiatry. 2001;58:85–91.
- 7. Mays VM, Cochran SD. Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *Am J Public Health*. 2001;91:1869–1876.
- 8. Remafedi G. Suicide and sexual orientation: nearing the end of controversy? *Arch Gen Psychiatry.* 1999; 56:885–886.
- 9. Meyer IH. Prejudice, social stress and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychol Bull.* 2003;129:674–697.
- 10. Cochran SD, Mays VM. Depressive distress among homosexually active African-American men and women. *Am J Psychiatry*. 1994;151:524–529.
- 11. Diaz RM, Ayala G, Bein E, Jenne J, Marin BV. The impact of homophobia, poverty and racism on the mental health of Latino gay men. *Am J Public Health*. 2001;91:927–932.
- 12. Dodge B, Sandfort TG. A review of mental health research on bisexual individuals when compared to homosexual and heterosexual individuals. In: Firestein B, ed. *Becoming Visible: Counseling Bisexuals Across the Lifespan*. New York, NY: Columbia University Press; 2006;28—51
- 13. Cohler BJ, Galatzer-Levy RM. *The Course of Gay and Lesbian Lives: Social and Psychoanalytic Perspectives.* Chicago, IL: Chicago University Press; 2000.
- 14. Savin-Williams RC. *The New Gay Teenager*. Cambridge, Mass: Harvard University Press; 2005.
- 15. Floyd FJ, Bakeman R. Coming-out across the life course: implications of age and historical context. *Arch Sex Behav.* 2006;35:287–296.
- 16. The American Association for Public Opinion Research. Standard definitions: final dispositions of case codes and outcomes rates for surveys. 2005. Available at: http://www.aapor.org.pdfs/standarddefs_3.1.pdf. Accessed June 23, 2006.
- 17. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Washington, DC: American Psychiatric Association: 1994.
- 18. Kessler RC, Berglund P, Demler O, Jin R, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry.* 2005;62: 593–602.
- 19. Meyer IH, Schwartz S, Frost DM. Social patterning of stress and coping: does disadvantaged social status confer more stress and fewer coping responses? Soc Sci Med. In press.